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The articles herein printed are the expressions of the writers and not necessarily those of the Department.

Skills Instruction in the Modern Elementary School

EDITOR'S NOTE: In this issue of THE NATIONAL ELEMENTARY PRINCIPAL we are bringing to our members a *few* of the highlights of the two weeks conference held last July at Boston University, Boston, Massachusetts, on the subject, "Skills Instruction in the Modern Elementary School." The 411 men and women from 42 states who attended this workshop have received a full report of the entire program. So that those who found it impossible to attend might share in this very rich experience, the officers of the Department thought it desirable to devote this bulletin to a few of the worthwhile lectures and group meetings. The lectures as here presented are short résumés of the two-hour periods.

The planning and management of the conference were under the able direction of Dr. Donald Durrell, Dean of the School of Education, and Dr. W. Linwood Chase, Director of Extension, Boston University. They brought to the group educators of national prominence. Each morning session was devoted to an exposition of a given subject for the first hour. During the second hour the lecturer was subjected to a battery of questions by a panel selected from the audience. Members in the audience were also asked to participate. Seminars were held during the afternoons.

We are indeed sorry that we cannot publish the entire report. In our October issue are Miss Mary G. Kelty's and Dr. Linwood Chase's reports on child development through the social studies, and skills instruction in this subject. The February issue of this bulletin will contain a discussion of the science program. Dr. J. Conrad Seegers started a real controversy when he gave his lecture on "Characteristics of a Modern Elementary School." He will report again on this very important subject for us at Atlantic City, February 27, 1950.

The officers of the Department wish to express their deepest appreciation to the other lecturers and seminar leaders whose reports are not included (this 48-page bulletin just won't stretch to all the good things we heard and learned) for giving of their time and help in making the conference so valuable: Morey R. Field, Karl Berns, Wilbert L. Pronovost, John G. Read, Leslie W. Irwin, Margaret Leckie, Warren S. Freeman, William C. Kvaraceus, Walter N. Durost, Trevor K. Serviss, Raymon W. Eldridge, Gerald S. Craig, and the poet, Robert P. Tristram Coffin.

—EVA G. PINKSTON

Child Development Through Reading

ERNEST HORN

Professor of Education, State University of Iowa, Iowa City, Iowa

RECENT literature on child development has given much emphasis to such facts as security, removal of frustrations, personal recognition, and group belongingness. The position here taken is that the reaching of these worthy objectives is facilitated or frustrated by what goes on, hour by hour, in the school. Every time a child attains an important idea or develops a useful ability, a better attitude, or a new and worthy purpose, he is developing. The better-balanced his achievement, the better his all-round development. This does not mean that development is accounted for merely by adding up the individual abilities, knowledges, attitudes that he has achieved; for, as each of these is achieved, the effects spread. For example, the child who learns to read has removed one very important source of frustration in his progress in school. He feels more secure, he gets more recognition, he can participate with more satisfaction in his group.

Each child in the elementary school develops in a group in which the range of ability is very wide, often as much as six or seven years, and almost certainly four or five years. It is obvious that the contributions of reading to child development will be limited by the success with which we make adjustments to these individual differences. And, of course, there is a wide range of other abilities as well as in reading.

The most important factor in achievement in any curricular field is purpose. Reading is no exception. Purposes will determine whether the pupil will read at all, what he will read, what facts to select from his reading, how to organize the facts which he has selected, how far he should go into a problem, and how he will decide what to try to remember. Helping the child to develop worthwhile purposes is the most important contribution that the school can make to continuing child development.

Let us review briefly the conditions in typical schools which aid or hamper the development of reading ability or child development in general. In the first place, we try to teach too much. For example, one introductory geography designed for grade four has been shown to contain two thousand new or difficult concepts. This means that even in a school year of two hundred days the child would have to get ten of these ideas a day. It is impossible to develop and achieve suitable purposes at this rate.

Second, much of what the pupil is asked to learn serves no purpose so far as he can see. His textbooks are crowded with many matters remote from his experience and frequently too difficult to understand at his grade level.

These curricular influences are made worse by the poor methods of instruction they invite. One investigator reports that page-by-page assignments were made in ninety-two per cent of the social studies classes in one state and that these were followed in more than four-fifths of the classes by a formal question-and-answer recitation based on a single textbook.

No provision is made for individual differences, and the plight of the lower fourth of the pupils in reading ability is especially tragic. Much of the failure to adjust to individual differences is undoubtedly due to an almost exclusive reliance on textbooks and to the meager library equipment in typical schools.

How can we improve this situation? We can greatly reduce the amount we attempt to teach. We can stress the cooperative problem assignment in which pupils and teachers set up together the problems upon which readings and discussions are to be based. We can provide references with a range of difficulty commensurate with the range of reading ability. We can discover early pupils with special disabilities and help them to succeed.

Skills Instruction in Primary Reading

HELEN A. MURPHY

Associate Professor of Education, Boston University, Boston, Massachusetts

THE aim of the program of the seminar in primary grade reading was to point out by lecture, demonstration, and discussion certain important aspects of teaching reading skills in the primary grades.

Teaching Methods—As general background, the four basic methods which have been developed to teach reading were considered. In chronological order they are:

1. The Alphabetical Oral Method, in which each word was learned by spelling orally.
2. The Phonetic Method, in which the words were presented orally beginning with words of one syllable and then by word families.
3. The Look-and-Say Method, in which the teacher introduces a word by writing it, pronouncing it, and having the child look at it and repeat it after her.

4. The Phrase Method, similar to the Look-and-Say Method except that the learning unit is a phrase instead of a word.

No one of these methods has proven entirely satisfactory; neither is any one completely condemned. It is probably true that we should have many ways of teaching reading within a single classroom. For example, some children seem to learn better if they learn the sounds first. We should teach those children the sounds as the first step in learning to read. Others may learn faster by a kinesthetic approach, and still others, by a written language approach. If a technique has been effective in teaching reading we should not discard it completely for a new approach unless the new approach has been proven to be more effective. At the present time the greatest emphasis is on the Look and Say approach. Success in this method is dependent upon keen visual perception and visual memory in the beginning of the learning.

Some of the research findings concerning methods in beginning reading were presented with the implications for classroom teachers. Included in this discussion were these items:

1. Many children with normal or superior intelligence have difficulty in learning to read. A teacher should be alert to identify such a child in her class.
2. At least eight out of ten reading cases are boys. Every teacher should check achievement frequently and watch for possible confusions.
3. Previous experiences affect children's success in reading. A teacher must survey the class to determine what experiences they have had and the ones she should provide.
4. Children differ greatly in language backgrounds. There is need for providing experiences which will provide the necessary meaning in the situation in which the word will be met in reading.
5. Mental age is only one factor in learning to read. Studies have shown children to be successful with four, five, and six-year mental ages, and others to be unsuccessful with seven- and eight-year mental ages.
6. Auditory and visual discrimination are important factors in learning to read. These abilities can be taught.
7. Success in beginning reading is dependent upon adequate teaching materials and methods. Every teacher of primary grade reading should be willing to try new methods which seem to be effective.

The worth of the experience approach to reading was discussed, and it was suggested that this method if used unwisely may be dangerous. A beginning teacher should be especially cautious if she decides to use it. She, more than an experienced teacher, is apt to neglect to control the difficulty

and scope of the material she writes. However, it is an excellent method of providing supplementary reading material if the teacher controls the vocabulary carefully by introducing few new words at a time and by providing many repetitions of the words needed in the sight vocabulary.

The value of using basal readers depends upon the way in which the books are used. If the teacher adapts her teaching by using books of appropriate level of difficulty for each group in her class and if she introduces the new vocabulary at the rate at which each child can master it, she is using basal readers effectively. Experience charts can provide excellent reading material to supplement the basal readers.

Individual Differences—The most feasible way of adapting instruction to individual differences in primary grade reading is through group teaching. The usual basis for this grouping is ability in word recognition. This ability can be measured by using the learning rate test—a test which indicates the number of words he can retain of ten new words taught in a twenty-minute period.

In order to determine the child's learning rate, select ten new words. A basal reader two years above the level is a good source for grades two and three. The International Kindergarten Vocabulary List will provide words for grade one. Some of the words should be colorful and some abstract. They should include many different letter combinations and vary in length. Some of the words should be phonetic and some non-phonetic. A teacher should select a list of words to be used with her class which will include all of these things. Some suggested lists for the different grades:

Grade I	*Grade II*	*Grade III*
iron	pinfeathers	anxious
cube	mischief	hydrophobia
blossom	decide	benefactor
radiator	column	inoculation
doughnut	sullen	opposite
against	severely	manage
faucet	personality	immense
celery	reassured	wrapped
orchestra	trick	chinchilla
medicine	perilous	disadvantage

In a twenty-minute teaching period, introduce the ten words in the first ten minutes and provide practice in the second ten minutes. Check each child's retention individually an hour after the teaching period. It is

well to check a second time before the child goes home at night. The final score is the learning rate. If the last score is better than the first, it means that if proper seat work is provided to give practice, the child will retain the larger number of words. If the score is poorer later in the day, it means that the child should have the lighter burden.

The groups should be flexible. For example, on some the groups might be based on the types of reading errors. In this plan of grouping, those who were making errors on small words would work together using easy material so that there would be no vocabulary difficulty and that their attention could be focused on the small words. Another group might be getting practice to improve their ability in phrasing. At some times the class should be taught as a unit. The study skills can be best taught to the whole class so that slower children may profit from the discussions of the brighter ones.

Use of several small groups within a class, each one having a pupil teacher, has many points of value. By having a larger number of groups, the instruction can be more closely adjusted to each child's level of ability. The pupil teacher of each group is a member of the group because he needs the work of the group. Rather than beginning this type of instruction with all groups in the class, it is wise to begin with the best group. These children learn more easily how to work together well, and if they enjoying working in that way, the others are more apt to think it is a good idea. The teacher explains to the pupil teacher before class how to conduct the group for the period and goes over the lesson plan with him. Any work supervised by the pupil teacher has previously been presented by the teacher. As soon as one group learns how to proceed, other groups can be added. The teacher teaches all the new material, and the pupil teachers carry on the practice exercises. If the plans are carefully made, this type of set-up is bound to succeed. The alternative to small-group work is an overabundance of seatwork. Types of work which can be carried out in the small groups by pupil teachers are word and phrase drills, oral and silent reading, comprehension checks, and drill through use of games.

Reading Readiness—Reading readiness was defined as the development of the skills necessary to learn to read without confusion. There is a tendency to disregard the fundamental concept of what reading readiness is. This is done whenever a certain number of weeks is set aside for instruction in reading readiness. It seems to be thought by some that if it is good, it must be equally good for everyone. In such thinking the existence of individual differences is forgotten. Many children come to school completely

ready to learn to read, and others may need reading readiness activities for an entire year before an attempt to teach them formal reading is made. The degree of readiness possessed by each child can be determined by giving a good readiness test.

(During the seminar a demonstration with children illustrated some of the techniques and materials useful in developing reading readiness. Ways for using the same materials as diagnostic tests to locate the children ready to read were discussed.)

Building a Reading Vocabulary—A program of primary reading includes three phases of word study, meaning, recognition, and analysis. The words included in exercises for meaning and recognition come from the reading book and are included in the reading lesson. The work on word analysis is done apart from the reading. The teacher should test the words to be taught to determine the need for enrichment exercises. If the child has many word meanings, no enrichment is needed. If his knowledge of word meaning is limited, added meanings should be given. The meanings may be given through conversation and pictures. For instance, to teach the word *train,* these pictures might be used: a streamliner, a bride with a train, an animal trained to do tricks, a football team which is in training. Conversation could be used to develop knowledge of freight and passenger trains, express and local trains. The visual symbol for the word should be in evidence all during the enrichment exercise. The teacher points to the word each time it comes into the discussion. This provides many effective repetitions.

Word recognition exercises must be planned to insure (1) accuracy, (2) security, (3) growth in vocabulary.

In developing this material, make the directions simple and complete so that the work can be accomplished with little direction by the teacher. Avoid eye strain by not crowding too much material on page and be sure the print is accurate and clear. An original paragraph including the words taught is an excellent inventory test. If a child can read at sight such a selection, it is one of the best measures of achievement. The following is a sample of such an inventory test. The underlined words are the words being tested:

Mother *went* to the *store.*
Alice *wanted* to go *with* her.
"I am *big,*" said Jerry.
"Alice is *too little.*"
Mother *laughed* and laughed.
They *all* went to the store.
They saw a *ball,* a *train,* a *boat,*
an *airplane,* and a *coat.*
What a *good time* they *had!*
Oh! Father *came,* too.

A teacher should check frequently on the sight vocabulary which has been taught.

Types of Reading Exercises—While the main job in primary grade reading is to develop certain skills and mechanics of reading, some work is done in developing the different types of reading—thorough type, speeded and associational readiing. Thorough type reading includes exercises in using the Table of Contents as locating pages of certain stories or finding a story that tells about a given subject. Organization skills are introduced through exercises in classification as presenting a list of words like jam, puzzles, cap, dress, game, ball, candy, doll, coat, bread, and asking the child to list the words under these headings: *Toys, Clothing, Food.*

Present a list of words as gown, coat, dress, hat, suit. The child underlines the word which means the same or nearly the same as the first word.

In all of these exercises it is important to use only words which are in the child's sight vocabulary.

Practice is given in evaluation or associational reading by giving assignments such as selecting material for dramatizations, by comparing stories with previous stories read, as the "Cooky-Cake Man" with the "Gingerbread Boy" and by asking questions which are not directly answered in the text. For example, a story might tell of a trip to the city and include many details but not tell directly how the child felt about the trip. The teacher's question might be, "Did Johnny have a good time?"

Speeded reading may be introduced following some of the exercises in classification. The child then would be familiar with the material and would be asked to find the answers quickly to certain questions. The first of these questions would be answered by a proper name, because these are the easiest to locate, then questions with phrases worded exactly as the book is, and finally just information which is included.

Oral and Silent Reading—The required speeds for the two types of reading as given by Durrell[1] are:

	Grade 1	*Grade 2*	*Grade 3*
Oral	45	78	110
Silent	45	80	125

The increase in speed in oral reading each year indicates security. The differences between oral and silent are not significant until grade three.

[1] Donald D. Durrell, *Improvement of Basic Reading Abilities*. Yonkers-on-Hudson: World Book Company, 1940, p. 143.

Both types of reading are important, and success in one doesn't necessarily guarantee success in the other. In oral reading be sure the audience situation is genuine. Never introduce word analysis during oral reading. Tell the child immediately the word he doesn't know, and provide practice with the word at another time. The only comments during oral reading should have to do with the story.

The major difficulty in silent reading in the upper grades is from lack of word understandings. This may be due to inability to comprehend meanings, or it may be due to a habit of ignoring new or difficult words. In either case teachers in the primary grades might prevent these difficulties arising if in their work in silent reading they used easy vocabulary, developed the lessons carefully, and always checked comprehension.

Alphabet—The question as to when the alphabet should be taught was raised by a member of the seminar. It was pointed out that, while it is necessary to recognize the letters of the alphabet in order to do spelling and phonics, it is not necessary to know them in alphabetical order until dictionary skills are taught. Whenever that is, thorough teaching of the alphabet should be undertaken. By that is meant not just knowing the alphabet by rote, but knowing the letters before and after any designated letter.

Phonics—Children need phonetic skills if they are to learn to read successfully and be able to solve new words independently. Some children seem to have a natural ear for sounds and others lack this ability. The present approach to the teaching of phonics is different from that used in the twenties in that formal teaching is delayed until the child has acquired a sight vocabulary of seventy-five to one hundred words and the teaching is based on this vocabulary. A complete phonic program will include work even in the middle grades.

Parents' Help in Readiness Program—Teachers should be ready to give specific suggestions to parents of things that they might do which would help insure the child's success in beginning reading. Here are a few such suggestions:

1. In looking at picture books, always ask questions concerning the picture which would cause the child to look from left to right.
2. Be sure that he turns the pages in the correct order.
3. Games of matching sounds, detecting what a noise might be, give good practice in auditory discrimination.
4. Call attention to similarities in appearance of objects the child uses daily, as the shapes of blocks and colors in flowers.

Skills Instruction in Intermediate Grade Reading

DONALD DURRELL

Dean, School of Education, Boston University, Boston Massachusetts

THE classroom program in reading must be planned to achieve child development objectives. Everyone subscribes to the truism, "We teach children, not subjects," but we teach children *through* subjects and we plan our daily program around subjects. There is no necessary conflict between child development and a subject program. The child's growth in the abilities and habits which make him an effective person depends on the design and methods of teaching rather than upon the organization of the daily program. An activity program or a core curriculum may miss child development objectives altogether and become merely an unfortunate scramble of subject elements. The key to child development is the establishing of interests, abilities, and habits which lead to desirable *use* of knowledge.

The reading program can serve child development objectives only if plans for the day, week, and year are designed to serve those objectives. Child development objectives may be stated as follows:

1. Establishing a growing variety of interests, with habits of individual initiative in following up and expanding those interests.
2. Establishing ideals and habits of good craftsmanship in at least a few fields for each individual.
3. Establishing a personal regard for one's social responsibilities in contributing to the welfare of the group.

These cannot be achieved by good intent alone or by a teacher who has enthusiasm, sympathy, and patience, but no specific program to reach them.

Establishing a Growing Variety of Interests in Reading—A basal reader is not a reading program in the intermediate grades. At best, it is only a sampler, a point of departure to a genuine reading program. It may be used for developing certain reading skills, but it is often a handicap to the development of independence in the use of reading. Suggestions for the use of the basal reader will be found in the "basic abilities" section of this report. If children are to be given a rich reading program in the intermediate grades, the plans must include supplementary reading in wide variety and also many types of experiences in the use of reading.

The reading program is divided into four major headings: imaginative literature, history and travel, the immediate world, and personal development. Any division of reading into types will result in much overlapping. This division is convenient for emphasis on the different activities which accompany each type. However, the suggested activities themselves will be suited to more than one type of reading.

Imaginative literature—Since imaginative literature is an important part of the reading program, there should be a specific plan for teaching a child the variety of possibilities and the delights which accompany it.[1] The plan for the year should include visits to the school and public library. It should include personal planning of leisure reading, with opportunity for the child to introduce books to others. Specialties in individual reading, such as sea stories, frontier life stories, stories about horses, and other topics are more satisfying to some children than varied reading. There should be some place for the reading of plays, with the parts being prepared in advance by different children, a practice or two in private as a group, then reading to the class. Poetry should have a place, and each child may find some poetry that fits his taste. Teachers who are skilled in the use of choral reading should give it a large place in their programs. Mythology and legends may be introduced and associated with holidays, seasons, stars, phenomena of nature, or words in our current vocabulary. There should be a definite place for humorous stories.

What is to be included in the year's plan for imaginative reading and how the various fields of interest are introduced will differ with each teacher. Some teachers will emphasize dramatization, some will give poetry a higher place, some will specialize in mythology or humor. One teacher may keep all members of the class on the same centers of interest, another will encourage independent group or individual reading. The important thing is that pupils see the number of doors of pleasure opened to them by imaginative reading. A set course of study with a fixed sequence is undesirable. So little is known about effective teaching of imaginative literature either in content or method, that it is important to keep open all promising paths to excellence.

It must be remembered that imaginative literature depends upon a special reading skill, that of translating words into images. Without this ability the development of wide reading of fiction is unlikely.

[1] For an excellent presentation of the possibilities in imaginative literature, teachers should read "Literature and Personal Reading," by Dora V. Smith, in *Reading in the Elementary School*, 48th Yearbook of the National Society for the Study of Education, University of Chicago Press, 1949.

History and travel—Some children will find that history and travel open many reading delights. The reading program in these subjects should also be designed to develop variety in tastes and interests. Time and place relationships are difficult to develop in the intermediate grades, except for the immediate surroundings of the child. The low position held by social studies among pupil subject ratings (try having your pupils rate their subjects by first, second and third choice) may be due in part to the "wide-sweep" aspect of social studies books which dismiss fifty years or whole continents in a few pages of generalizations. It is more promising to allow individual and group specialization on a single place or period, with the allied activities of displays, pictures, collections, maps, motion pictures, and recordings to bring them to life. Since free imagery is out of place in history and travel, extensive use of realia is necessary to give meaning.

Individual and small group activities are necessary to develop the wide variety of interests possible in the social studies. In the study of the Plymouth Colony, for example, some children may find their first interest in antiques, interior decoration, costume design, agriculture, or in the reading of biography. This will come only if individuals or groups are permitted to specialize and emphasize these in their presentations to the group. Study of other countries or other sections of this country may be made richer by having a group of children work up a display of pictures, maps, and produce of the country and on the day of their display invite one or more parents or relatives who know that country as guests of the class. The presence of such a guest will make the country real, and will give the child an understanding of the desirability of reading about distant places before visiting those places or meeting people from them. A changing exhibit in the classroom, in the hall, or in a vacant store window may provide the incentive for discovering the possibilities in reading about social studies. If the exhibit has several features, with each being developed by small groups or individuals, different aspects of historical or travel reading are opened.

Immediate world—The immediate world, as typified in the possibilities of reading in science, arts and crafts, athletics, outdoor sports, music, homemaking, costume and dress design, and industrial arts, is often neglected in planning a reading program to open a variety of interests and habits in the use of reading. Science, especially, has infinite possibilities for developing specialized reading interests. There are many books about birds, animals, insects, that should be brought to the child's attention. The physical sciences also offer reading in geology, astronomy, agriculture, electricity,

microscopy, photography, airplanes, automobiles, boats, telegraphy, radio, television, and all types of manufacture and industry. Arts and crafts have large libraries behind them, and many are written to be of interest to intermediate grade children. Athletics and outdoor sports will offer reading incentive to boys who otherwise might not find reading worth while. Children should learn of the existence of books on gardening, costume design, furniture making, painting and sculpture, music, interior decoration, metal work, architecture, and all types of arts and industries.

If the children are to make these discoveries, the school program must be arranged to permit it. Reading about activities in the immediate world should be accompanied by trips, collections, displays, conversations, construction, laboratory experience, and other types of action. Furthermore, the field is so vast that only through individual or small group projects can the rich resources be revealed. A set course of study with a single textbook may assure a broad-sweep coverage, but cannot give the delights of following through on a field of special interest.

Personal development—Reading for personal development is a broad title meant to cover reading especially designed for development of ideals of conduct, habits of courtesy, religious development, or standards of behavior. It may also include reading about health, posture, dress, speech, conversation, or other subjects developing and safeguarding one's physical, intellectual, and spiritual growth. This field was formerly the basis for selecting materials for basal readers. There must be a place in a reading program to introduce the child to these types of reading.

Teaching Good Craftsmanship and Social Responsibility Through a Reading Program—The greatest enemy of this phase of child development is the uniform reading assignment. Uniform assignments usually remove the possibility of socially desirable forms of motivation. Diversified activities allow the child to make individual contributions to the group, increase the value of being a member of a group, and make the task more important to the child. The bright child in the uniform assignment steals the glory without effort. He may develop attitudes of superiority coupled with habits of setting low standards for himself. The slow learner in the uniform assignment seldom contributes to the class. The bright child practices sitting while watching the slow learner practice confusion. This situation cannot result in giving either good craftsmanship or good social attitudes.

If any teacher is in doubt about child attitudes toward diversified assignments, let him ask the members of his class to select privately from

one of the following choices: In studying about Indian life, would you prefer to: (1) Have everybody in the class read the same story about Indian life? (2) Have groups of three or four people work together on different stories about Indian life? (3) Have every person read different stories about Indian life?

Group work will ordinarily be chosen by 80 per cent of the class, and individual work by the remainder. The children will give psychologically valid reasons for making their choice of group or individual assignments. They will point out the undesirable features of the uniform assignment.

A pupil who has the sole responsibility for making a report, or who shares the responsibility with two or three others, will hold himself to much higher standards. He can stay with his specialty long enough to understand it and enjoy it, and at the same time will increase his understanding by the task of presenting it to other pupils.

The chief difficulties in the way of diversified reading assignments are: (1) lack of supply of reading materials; (2) presentation of the results of independent study; (3) inability of teachers to plan a complex program.

A well-planned library which includes the rich possibilities for developing reading interests and allows individual contributions to the group is highly desirable. If some of the money spent on uniform textbooks for each pupil in reading, social studies, and science were allocated to individual books, it would be possible to build a library rather quickly. Except for the development of reading skills, there appears to be no intermediate grade reading objective which requires the purchase of more than a single copy of any book. In skills development, there are seldom more than five or six pupils who need the same book. A book for each pupil in each subject need not be the same book! Until teachers plan purchase orders for different books around various topics, it is unlikely that school or classroom libraries will be developed. The individual teacher might do well to collect clippings, stories, and pictures around several topics and place them in an envelope or folder. After a few years, this collection might grow to be a useful library in itself, and it would have the additional advantage of moving with her if she changed teaching positions. Handing the materials to the pupils, however, will not take the place of individual search for suitable material. It will permit diversified assignments, even though it may not give the pupil experience in the use of resources.

The second difficulty, the presentation of results of independent study, may be overcome with experience in handling it. One of the problems is in maintaining interest of the listeners. They may feel the student report

unimportant as compared to materials presented by the teacher or by the textbook. It is helpful if the program for the study of a subject is outlined on the blackboard or on duplicated materials, with each report assigned to a place so that its relation to the whole subject may be seen. It is also desirable for pupils to keep their displays, collections, and other materials secret until the time of the report. The element of secrecy in group reporting is essential to a true audience situation. Another difficulty is in poorly presented reports. Children must be given help in many ways of making reports interesting. They must be taught the use of maps, charts, pictures, diagrams, outlines, and exhibits. Few people can hold the attention of an audience by words alone. Another difficulty is that pupils require too much time for making reports. This may be countered by giving them a set time for making the oral report, then having them prepare supplementary materials for booklet or bulletin board presentation.

The third difficulty is that of the inability of the teacher to administer a complex program. It is easier to move all the sheep from one pasture (or textbook or workbook) to the next, than it is to allow individuals or groups to venture on their own. This difficulty is insurmountable for timid souls. Others may find it possible to plan a schedule of diversified assignments in one or two subjects, but keep the pupils together in most of the others. More skilled teachers will find it possible to individualize skills subjects through small group work or individual progress plans, to give diversified assignments in content subjects, and to provide group activity where it is most desired. The teacher should not attempt to keep in mind what each pupil is doing every minute in the diversified assignment. She will need a diagram or outline of the program, and the pupil will also need his own record of his plans.

Child Development Through the Skills Program in Reading—The two child development objectives which are served by a well-planned skills program are establishing good craftsmanship and developing good social attitudes toward other pupils. The first is obtained by a program which gives the child habits of success in gaining specific objectives, and the second is reached by replacing competition with cooperation.

If the child is to acquire habits of success in reaching specific objectives, certain conditions must be met by the skills program: (1) the materials of instruction must be adapted to his level and learning rate; (2) he must know what skills he is trying to master and what are his strengths and weaknesses in those skills; (3) he must know the purpose of the lessons and be able to see his progress in them.

The best method of discovering whether or not the instructional materials are adapted to the pupil's level and learning rate is through informal testing. Individual oral reading of a book will reveal quickly the number of difficult words per page. The meaning of difficult words should be checked. If the pupil encounters more than one difficult word in twenty running words, the book is unsuitable for him. A better criterion, especially for silent reading, is one difficult word in fifty running words. Pupils will differ in their persistence of attention in difficult material, but it is desirable to keep the vocabulary burden in a day's reading at a level which will allow mastery. A group test for the suitability of a textbook can be made by selecting the more difficult words and phrases from three or four pages, then build word-definition matching tests.

The choice of textbooks for intermediate skills work will depend upon pupil need. It is likely that most fourth grade classes will have five or six pupils who will develop their skills best in second grade books, and there may be some pupils who need a fresh start in primers and first readers. Some pupils will need third grade basal readers if they are to progress in skills. Other pupils may be able to read satisfactorily in fourth readers. Those pupils whose reading ability is above fourth grade will require no basic readers. Except for certain advanced abilities, they will need no skills instruction, and these abilities may be taught with almost any material. The basal readers for the slow learners should, of course, be new to the pupils. They must not be the books to which the pupil was exposed in lower grades. In buying books for teaching reading skills, it is well to reserve certain basal readers in the primary grades as materials for a fresh start for pupils in intermediate grades. The adoption of a single basal reading system to the exclusion of others is certainly not recommended.

If the child is to help himself and to benefit greatly from instruction, he must know the skills he is trying to master. These skills should be few and clearly defined. The most important ones may be classified as: vocabulary development; comprehension and recall; speeded reading and skimming; thinking abilities related to reading.

Vocabulary development will require special attention for slow learners in the intermediate grades. Many of these children will need ear training, visual discrimination of words, and other elements of a word analysis program. It will be necessary to give them a systematic program in word structure, through both the reading and the spelling programs. Although it is hoped that a word analysis background has been acquired in primary grades, there are many children who must have a fresh start. Advanced

skills, such as the study of prefixes, suffixes, word roots and common syllables will need to be taught, even though the child has done well in beginning word analysis. When new words are learned, it is well to point out their visual structure and to provide some quick recognition practice.

The major problem in the intermediate grades is word meaning. Direct instruction in new vocabulary of the books used in the class will enlarge the vocabulary as rapidly as efforts at word derivation methods. Skim new material for unknown words, and teach the meanings through illustration before the child reads. Unless the child knows word meanings, he cannot make the images necessary for understanding and appreciation. If the word meaning problems in a textbook are much too hard for the slow learners, it may be desirable to read the material aloud to them, translating hard words.

Acquiring a large meaning vocabulary through reading depends upon the ability to notice new words, to get their meaning through context, and to remember them. Try asking children to find and write down the words they don't know in three or four pages of difficult reading. The bright ones will have the longest lists. The slow learners cannot find the words they do not know. Build a vocabulary test, over these same pages, with words in one list and definitions in a different order beside them. Have pupils match these words and definitions before reading, then try to improve their scores by locating the words in the books to see how they are used. The gain in score will indicate the child's skill in using context to get meanings.

Comprehension is always measured by some form of recall. There are many levels of recall. One of the easiest is identification of multiple-choice or true-false answers. This does not assure that the child could provide the answer without the aid of the objective test answers. A more important ability is that of unaided recall, either oral or written. An interesting informal test is one which compares multiple-choice recall with unaided written recall. Ask the child to read a selection, then write all that he can remember of it. Next, have him take a multiple-choice test over the selection. Some people do well on the objective test, but can give only an extremely weak account in writing.

The best method that we have found to improve oral recall is by having the children practice recall in pairs. Each reads a different selection silently, then each asks the other prepared questions over the selection read. The questions are graded in detail, the more detailed questions being given when the children are first learning to improve recall. Later practices use more general and fewer questions until the child is able to respond to the

question, "What did yours say?" Our experiments show that practice in oral recall is very effective. They also show improvement in written recall, even though no specific practice in written summaries is given.

Of course, recall is impossible if the intake of ideas is poor. The chief difficulty in intake of ideas is tough vocabulary, complex sentence structure, or abstract ideas for which the child's experience is inadequate. Another common difficulty, however, is chronic inattention. Every adult knows this to some degree in his own reading. He suddenly finds that his mind has left off a few paragraphs back. Some children whose intent is good find that their minds leave off at the first sentence of uninteresting material. The best remedy for this is to get more palatable material. However, it may be remedied by giving the child questions prior to his reading. When he has learned to keep awake by finding answers to these questions, he may be given questions to use after reading each paragraph. Many children will need specific help to overcome inattentive reading.

Speed of reading can be improved rapidly through timed practices, with a graph being kept of words per minute. The material must be easy and suited to rapid reading. Practices in speeded reading should be followed by checks on comprehension. The directions should be, "Read this as fast as you can, but be sure to read it well enough to answer questions afterward." Another speeded skill is that of skimming to find answers to questions. Still another is skimming to classify or to ascertain if the material is pertinent to a particular problem.

There are many types of thinking abilities related to reading. These are divided into: organization of ideas; elaborative thinking in relation to reading; critical thinking in reading. The first can be learned through exercises in outlining material read. This can be in several stages of difficulty, with the child at first merely arranging titles to paragraphs or classifying major and minor ideas which have been presented to him. Or he can match titles to paragraphs, being given a choice of three titles one of which fits better than others. Later he can make his own outlines.

Our experiments show that elaborative thinking in relation to reading responds well to specific teaching. If children are given practice in finding topics for further study, finding questions that the reading should but doesn't answer, finding things to do in or out of the classroom about what has been read, or finding applications or illustrations of a point, they make rapid gains in the ability. If a child is unable to think of any questions, illustrations, or uses in connection with material he reads, it is unlikely that he will remember it, or that he will make active use of his learning.

Most of these abilities do not appear on standard tests. If the child is to know what skills he needs help in, informal tests are necessary to demonstrate his need. Unless he is shown an analysis of his various abilities—word abilities, recall abilities, speeded skills, and thinking skills—he is unable to help himself. A blind program of stumbling along in reading books wth the vague hope that some day he will improve will result in little but despair. Certainly, he can have little self-respect, nor can he build habits of good craftsmanship in such a program.

Knowledge of progress is the major motivating force in a skills program which fosters child development. In each of the various sub-skills related to reading, it is important that there are graded lessons which lead step-by-step to confidence and achievement. Records must be kept of progress in each ability, and the practice materials and exercises so organized that progress is evident to the child. It is likely that we will see the development of skills books which offer this type of practice, but at present most workbooks for intermediate grades pay too little attention to motivation through knowledge of progress in specific reading skills. Incidental teaching may be adequate for rapid learners, but the slow learner in intermediate grade reading will require orderly and specific practice.

The chief violations of child development objectives in teaching skills come through the uniform assignment. The attitudes of children toward each other, toward themselves, and toward the subject are likely to be poor when the competitive assignment is used. The rapid learner does not need the skills practice, but steals the glory from the slow learner. Don't give skills instruction in reading to those pupils who don't need skills instruction. If their time must be concerned with skills, let them help slower learners to improve. They should learn that superior endowment means greater responsibility for others. A class may be taught to delight in the progress or achievement of each of its members.

Principles of Elementary Education, Dr. Henry J. Otto's brand new book, just released by Rinehart & Company, New York, is for teachers, principals, and supervisors who wish to bring themselves up to date on modern concepts in elementary education. Beginning with a chapter entitled "A Visit to Modern Elementary Schools," the reader is introduced to many of the best features of today's best schools in a way that gives reality and meaningfulness to the rest of the book. At the end of each chapter student activities are suggested and additional readings are recommended.

Child Development Through a Language Arts Program

BESS GOODYKOONTZ

Director, Division of Elementary Education, U. S. Office of Education, Washington, D. C.

1. Language is important to children at all ages and stages of growth and and development.
2. Day-by-day language problems are common to children at home, at play, as well as at school. These are some I have observed recently:
   a. Boy of 10 wanted to phone to ballpark to ask whether game would be held, price of tickets, where the seats were, and time.
   b. Girl of 11 wanted to write a thank-you note to a friend of her mother's who had sent a gift.
   c. Girl of 13 wanted to write her cousin to ask her to visit her for a month during vacation.
   d. Boy of 11 wanted to write to his father, who had gone to his old home in Kansas, to ask him to bring back a guitar he knew was there.
   e. Girl of 12, informed she was one of ten winners in radio contest, was asked to prepare a brief talk for the Saturday afternoon radio program.
   f. Girl of 15 was asked to serve as chairman of young people's church picnic—plan menu, call or write members, and divide jobs and food preparation.
   g. Girl of 10 decided to put all her snapshots in an album, label each as to time and place, and briefly tell something about each picture.
   h. Nine-year-old boy touring East with his parents collected pictures, folders, travel booklets, menu cards, and made a record of each.
3. School situations also demand increased language activities. The following characteristics of modern school programs show many implications for language arts:
   a. Fewer short subject-divided periods and more large blocks of working time.
   b. Less dependence on consecutive progress through textbooks, more use of wide reference reading.

c. Fewer class assignments, more small group responsibilities and self-planning and direction.
d. Less study and recitation, more work periods on problems of class or personal concern.
e. A higher value attached to efficient work habits, including self-direction and evaluation.
f. Fewer sets of books and more varied materials and equipment to work with.
g. Better recognition of the learning possibilities of such activities as consulting, talking, visiting, planning, making, demonstrating, collecting, etc.—all verbs of individual action.

4. These important life needs for language activities, both at home and at school, raise these questions: Should there be more time, more emphasis, more materials for teaching oral and written English, grammar, reading, writing, and spelling? The 1947 Conference of Leaders in Elementary Education would not recommend more time or more drill for the different subject areas represented at the conference; instead, they recommended attention to "Experiences Children Should Have." (See Education Brief No. 8, Division of Elementary Education, U. S. Office of Education, Washington 25, D. C.) These "Experiences Children Should Have" brought increased opportunities for the use and improvement of language skills.
5. The whole school program provides "experiences with language," if teachers plan it so.
   a. Who does such "language work" as the following: blackboard announcements, school records, school newspaper, bulletin board, invitations, reports to local papers?
   b. What kinds of school or class activities may involve large amounts of language activity? Class paper, room library, analysis of home reading, analysis of home listening to radio programs, analysis of movie programs, group reports, assemblies, poetry book, what's new—conversation period, study of the comics.
   c. How can legitimate homework assignments involve language activities? Interviews, diary records, reports of radio programs, book discussions, reports of things seen or done, notes on meetings.
6. The question is often raised: With this sort of program, emphasizing language-using experiences, do children develop language skills? Following are some principles regarding the development of skills, which may help to answer that question:

a. There is an orderly development for children in understanding language forms and using language skills which parallels their growth and development in other lines.
b. In learning to use language forms, as in learning to read, readiness for the task is important.
c. Drill on language facts, like drill on other facts or skills, comes after the facts have meaning and when the skills' purposes are understood.
d. Tasks calling for the language arts, like problems in social sciences, or in social behavior, or in artistic composition, are usually complex —that is, they involve a situation, a series of choices or decisions; they are like activities of real people; they depend upon a plan. This fact casts considerable doubt on series of exercises in old-fashioned textbooks that skip lightly from grammar to punctuation to paragraphs, etc. It implies the need for a different type of project. These projects should deal with situations which boys and girls are facing, in which there are decisions to be made, plans to be formulated, and judgments.
e. There is no such thing as absolutely logical order for the learning of language skills. Some language skills may seem to an adult to be harder than others, but children need to know most of them on rising steps of difficulty. That is, planning a party for parents in primary grades may call for the same types of language skills as the eighth grade needs when it plans the spring dramatic show. The difference is in the degree of difficulty.
f. Because children do not learn at the same rate, it is not sensible to set absolute requirements for any age or grade and expect everyone to attain them.
g. Children practice best when they see the need for perfection of some skill.
h. The feelings which go along with the acquisition of skills are important. In today's schools, we see children using skills in a variety of places in which they recognize them to be useful. They learn such accompanying feelings as these: it is good to check sources; it is important to have books which tell facts; it is desirable to read a variety of materials; it is pleasant to develop one's own style of writing; numbers have to be accurate to be useful, and so on. These things make for emotional tone. A positive emotional tone plays a big part in making the Three R's effective.

Child Development Through an Arithmetic Program

JOHN R. CLARK

Professor of Education, Teachers College, Columbia University, New York, New York

IS an arithmetic program essential to child development? Yes, for these reasons: children have endless and continuing needs for (1) counting; (2) measuring; (3) using calendars, time tables, maps, etc.; (4)comprehending the language of graphic representation and statistical data; (5) thinking about costs of food, clothing, shelter, recreation. In short, children live in a culture that is highly quantitative. To live effectively in their culture, children have to think *quantitatively*. They repeatedly must respond to the "how muchness" and the "how manyness" of their environment. Without an arithmetic program children would too long remain illiterate about an important aspect of modern living. Arithmetic is a tool for effective living.

Corollary to the above proposition, children can most effectively meet their quantitative needs when they understand arithmetic, when its concepts and techniques are meaningful, rational, sensible. It is a good investment of the pupil's time for him to set out to "see" how the number system "works." When he "sees" that arithmetic is essentially a number scale or ladder, that addition is climbing up the ladder by equal or unequal steps, that subtraction is climbing down the ladder, then the specific facts of addition and subtraction become simple deductions from the concepts. We are saying that pupils best learn arithmetic when they think both about (1) the meaning of arithmetic, why it works as it does, and (2) the uses or applications of arithmetic in their experience.

Programs of child development in any subject seek to develop resourceful, discovering, inventive minds. In arithmetic pupils can, under good instruction, discover many facts and relationships. To rely upon memorization of countless specifics—drill in the traditional sense—rather than to depend upon practice in reasoning, thinking, discovering, is to build the house upon the sands. The pupil who is disposed to find out for himself, to think it out rather than accept it upon authority, shows that his arithmetic program has been well conceived.

It is obvious that pupils do not mature at the same rate. Not all fifth graders are simultaneously ready for long division; if ready, they could not do the same work in the same time. The arithmetic teacher must accept this basic fact of child development. We have yet to learn how, in classroom practice, to take effective account of this fact. We are currently using the techniques of individual progress, sub-groups within the class, "group process" with the entire class, and the like. For both the classroom teacher and the author of instructional materials, this problem of adjustment to varying rates of maturation remains urgent.

In child development programs, then, we must provide pupils not only with quantitative experiences but with a mastery of the tools of thinking. These tools include both concepts and skills. Central in the arithmetic program is the study of the number system.

Skills Instruction in Arithmetic

ROBERT L. BURCH

Assistant Professor of Education, Boston University, Boston, Massachusetts

THERE is an apparent lack of basic knowledge and background of arithmetic on the part of teachers and administrators due to their own type of training in this subject which might best be described as a program of meaningless, verbalized, mechanical arithmetic. This mechanical kind of arithmetic has been fostered because research techniques in the past have emphasized the factors of speed of manipulation of number and accuracy of computation as the basic measures of success in arithmetic. Those responsible for research have failed to apply the criteria of level of understanding, retention, and transfer as measures of successful learning. As a consequence, mechanical procedures have been the principal approach to arithmetic.

Arithmetic is a *system* of quantitative thinking. Observance of the rules and procedures enables one's thinking to proceed in a systematic manner directly to the goal when mental manipulation of a quantitative situation is required. Whenever we have a spatial or temporal grouping, we have a quantitative situation. This may be a natural grouping such as a group of people, a series of dog barks, or the like. The grouping may

also be determined artificially by measuring a magnitude or continuum of time. Fractions, too, may be considered as a description of quantitative situations for they symbolize groups of parts. A consideration of the grouping situation involved is the vital factor to be examined in the arithmetic process. Our principal responsibility is to teach the child to see the grouping in the arithmetical situation as he works toward the solution of a process.

Man deals with quantity in many ways, some methods being more precise than others. Early man kept a record of the number of cattle he owned by matching each animal with a small pebble which he gathered up as he counted his herd. Some quantity situations are described by the use of such adjectives as *longer, large, widest, shortest.* While these terms are not the most precise way of dealing with quantity, they have particular meaning in a particular situation for the user.

Our efforts to develop arithmetical understandings for children stress the "meaningful approach" to the teaching of arithmetic. The basic tenet of the "meaningful approach" is that the child must see sense in the concepts and procedures that constitute the subject of arithmetic. Through many concrete and semi-concrete experiences the teacher strives to: (1) Have children understand the various meanings for number. For example, *six* may stand for a simple group of six; it may be referred to as a quantitative situation in which there are two groups of *three* each, or *two* and *four* etc.; it may refer to a particular item in a certain order, or it may refer to the ratio idea of two *three's.* (2) Have children understand the significance of number—the actual application of number in specific situations such as identifying the number of items in a group or reproducing the number idea by selecting a designated number of items out of a larger group. (3) Have children understand the systematic plan upon which our number system is built so that they will see sense in the procedure of regrouping on *ten* and the symbolization of these procedures by the placement of symbols in certain positions when they carry out the fundamental processes. (4) Have children understand what happens in the addition, subtraction, multiplication, and division procedures as they are applied to situations involving units and parts. (5) Have children understand and utilize the inter-relationships in the number system and processes in a manner that will enable them to discover for themselves the various phases in the arithmetic program.

Meanings and understandings do not evolve out of concrete or semi-concrete experiences unless the teacher very carefully guides the develop-

ment of these abstractions and generalizations. There is nothing about concrete experiences as such that automatically enables the child to see the sense in the arithmetic he is called upon to do, unless the experiences are carefully planned to assure the development of the ideas prior to the presentation of the symbolic representation of these ideas.

Although this approach is referred to as the "meaningful development" of arithmetic, it does not mean that there is no place in the program for repetitive practice. Instead, this approach more carefully defines the place of drill. When children are taught meaningfully there will be a wide assortment of varied activities to develop the meanings of the concepts and procedures. When the child has obtained an adequate idea of the aspect under consideration and when his mental attack has reached the most efficient level, repetitive practice must be applied to make permanent the efficient level that the child has achieved. The important thing to recognize is that, when habitual response has been established for concepts and procedures which were first understood, the child has resources for self-reëstablishment of habituated procedures that have been temporarily forgotten.

Finally, the "meaningful approach" does not neglect the use of incidental experiences. This approach recognizes that incidental experiences provide excellent motivation and a practical type of practice, but they do not provide a suitable basis for the systematic learning of arithmetic. The logical step-by-step development of the understandings of arithmetic needs to be carried out in systematically planned arithmetic periods.

When correct meaning and efficient procedures of thought are established, practice materials may be applied for the purpose of skills development. Arithmetic learnings which, because of their usefulness in applied situations, have been carried to the stage of proficiency represent the skills of arithmetic. This proficiency includes accuracy, a good and steady rate, smoothness, and production with a minimum of fatigue.

Psychology of the Teaching of Arithmetic—Most of the learning we experience is a reorganization process. In arithmetic, learning as reorganization functions throughout the entire program. In accepting the principle of learning as reorganization, we recognize the fact that the child has the ability to revise his thinking and modes of attack in the light of increased experience brought about by the influence of a planned program of guidance on the part of the teacher.

If one accepts that learning takes place through a process of constant revision, then certain fundamental implications need to be recognized:

(1) The learning of any concept or procedure is a long time process. For instance, the first grade teacher must begin to develop the ideas of division and each teacher in the succeeding grades must guide the reorganization of the child's ideas so that he will be ready for division as a symbolic process at the fourth or fifth grade level. (2) In remedial work it is essential to find out how the child is thinking and not to be always concerned only with whether or not the child is getting the right answer. (3) Frequently when the child's rate and accuracy seem to have fallen off, the root of the difficulty may lie in the fact that the child is operating on a higher level of mental thought than previously. Due to the fact that he is adjusting to this new mode of attack, he is not sure of himself. Yet, from the viewpoint of future achievement in arithmetic, his reorganized attack represents definite growth. (4) If we accept as basic this theory of learning as reorganization, the errors a child makes in the learning process must not be judged as serious as they first appear, for the errors as such present to the child another opportunity for a learning situation.

From the viewpoint of the psychology of transfer and retention, research clearly indicates that these objectives are better attained when children really understand the materials to which they have been exposed. Thus the approach to arithmetic which holds that the child must see sense in arithmetic will also help provide for more adequate transfer and retention.

Methods of Teaching Arithmetic—Methods of teaching, as well as the strengths and weaknesses of the various teaching techniques, were discussed. These included: rationalizing borrowing in subtraction and carrying in addition; the apparent method and the increase-by-one method in division; division of fractions; division by decimals; the place of the quotient figure in division; the use of "crutches" in arithmetic.

It was pointed out that "crutches" can help to develop meaning; however, teachers should not assume that pupils will automatically drop the crutch later—they must guide the pupils away from the device after it has served its purpose.

The place of devices, both teacher-made and commercial types, was considered in the light of the possibilities held for developing meaning and understanding for the student.

Some pertinent suggestions for teaching problem solving were offered. Teachers tend to think that all problems are put into the text for the purpose of helping pupils learn to apply computational skills in situations they must meet in life. Actually, a textbook problem should be considered

as an experience which enables the child to identify the grouping structure of the quantitative situation and gives him an opportunity to learn the process which should be used for that grouping situation.

Textbook problems also serve other purposes: they provide the setting for introducing new aspects; they are sometimes used to impress pupils with the need for a new procedure; they often serve to provide drill material for a newly taught step; finally, they are frequently utilized for review and testing purposes. Teachers should not expect pupils to learn to apply arithmetic through experience with textbook problems. Rather, they should seek out problems in areas such as science, social studies, extracurricular activities, and community situations.

In teaching problem solving, there has been too much emphasis on getting the answer and too little concern as to whether the child really understands the situation described in the problem. Teachers who teach children to solve problems by looking for verbal and number cues are directing these pupils away from rather than toward real problem solving. In fact, even those who stress such logical procedures as formal analysis (What is given? What is to be found? What is to be done? etc.) are not giving pupils the help they need at the crucial point in the problem solving process. That is, even when pupils recognize what is given, they still need much guidance to interpret the kind of quantitative grouping involved in the situation, and they also need much help in deciding the process to apply to that grouping structure.

Another aspect of much concern in arithmetic is the matter of individual differences. Too frequently we consider only individual differences that exist from one individual to another. Actually, there are also differences which exist within the individual himself. To illustrate, an individual may be fairly competent in addition and not as competent in fractions. Permanent homogeneous grouping provides only for the differences that exist among the individuals comprising the class group. The grouping in the arithmetic class must be flexible enough so that we can provide for the differences within the individuals themselves.

The following suggestions are made for caring for individual differences: (1) slow learning children need many more concrete experiences to develop basic ideas prior to the presentation of symbolic procedures; (2) it is not essential that teachers conduct a formal lesson each day—much time is needed for giving individuals the help they require; (3) children who are competent in a specific aspect of arithmetic should be used as proctors to help children who are having difficulty; (4) the teacher

should not depend wholly on practice material provided in the arithmetic text and in workbooks, but should develop practice material which fits the individual needs; (5) more use should be made of self-teaching devices and materials.

The Program of Curriculum Revision—The system of thinking we call arithmetic can be held accountable for achieving broader objectives than the commonly accepted objectives of computation and problem solving. Children need to learn to: (1) use number to communicate more precisely ideas which involve quantity; (2) use the systematic way in which number notation is set up to help in reacting meaningfully to numbers they meet in social studies materials, current events, and so on; (3) use number to organize and classify tasks, research, and plans; (4) understand the use of number in making approximations; (5) understand our present civilization through the provision of opportunity to become acquainted with the history of number and measurement.

Evaluation in the Arithmetic Program—In evaluating our arithmetic program we ought to consider more than the oral and written results of pupils as a reflection of our teaching. We need to have pupils actually manipulate materials to see whether or not their understanding is clear. The teacher will often discover that the pupil lacks a good understanding of some of the basic steps in a procedure. Manipulation of materials also serves another purpose—that of requiring pupils to provide evidence that their answers are correct. This kind of checking is more valid and valuable than the mechanical checks such as adding in reverse order and the like which are constantly emphasized in the teaching program.

We need to be constantly observing children at work both at the blackboard and at their seats to discover the ways they are doing arithmetic work. Factors such as digit reversals, immature procedures, and the development of emotional tensions can be detected by the teacher who develops a keenness in observational ability.

Frequently we should forget about grading papers and should spend more time analyzing papers to discover the child's difficulties in arithmetic. The child who has a low score due to inaccuracy of computation may be troubled because of a single faulty idea or procedure. In comparison, another child who receives a much higher score on the same assignment may actually have several serious difficulties that hinder his attack upon arithmetic. In this case, the child with the higher score is certainly not as competent in arithmetic as is the one who had the lower score.

A great deal of use should be made of the technique of oral reporting

by the pupil as he goes through one or more of the processes in order to discover how the child is thinking out the steps. This means that the teacher needs to establish excellent rapport with her children so that they will honestly describe whether they are getting the answers by counting, by the use of crutches, guessing, or other means. Though introspection is not considered an ideal means of obtaining dependable objective information, it is a practical and necessary approach in the teaching of arithmetic.

Paper and pencil tests, although not the only means of evaluation, are a vital part of the evaluation program. In planning the testing program in arithmetic the kind of test will depend upon the purpose to be served. For many testing purposes no satisfactory commercial tests are available and teachers must develop their own tests.

Because each phase of arithmetic needs to be built on a background of previously developed understandings and skills, much more extensive use needs to be made of readiness tests than is usually the case. For instance, before developing column addition with sums larger than ten, the teacher needs to determine the pupil's ability with number facts, higher decade addition, placement of addends, and ability to add seen to unseen figures.

Textbooks often provide readiness tests for use prior to the introduction of a new topic. When they are not available or are unsatisfactory, such tests should be developed by the teacher or by the school system. Readiness tests are never to be considered as instruments to be used only at the primary level, for there is readiness to be considered prior to the development of each phase of the arithmetic program.

When the teacher begins her work with new classes at the opening of the school year she needs to inventory the available understandings and skills. This inventory should include not only material which has been covered previously but should also include items designed to determine what understandings the pupils have of the new materials which are to be presented. When children learn arithmetic meaningfully, they can frequently apply the relationships and generalizations to untaught areas.

The diagnostic test is an important tool in the teaching program. Certain tests on the market such as the Buswell-John Diagnostic Test for Whole Numbers, the Compass Diagnostic Tests, and the Brueckner Diagnostic Test for Whole Numbers, Fractions, and Decimals are useful instruments but they do not provide for a number of the diagnostic needs. When teachers construct their own diagnostic tests, they should limit items to relatively narrow areas to be certain they have carefully provided for

all of the important kinds of difficulties. Three or four items should be used for measuring each kind of difficulty.

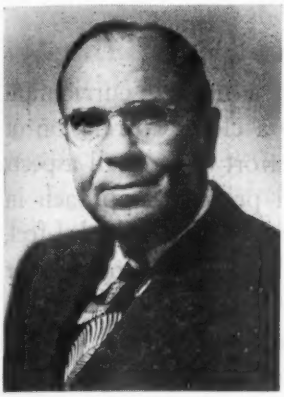
When diagnostic tests are used, a common procedure is to note the pupil's difficulties on the test and to apply drill in the area of difficulty. The teacher must recognize that the test only indicates the area of difficulty and does not indicate the faulty thinking that is causal. Therefore, the first step after applying the diagnostic test must be to get at the cause of the difficulty by having the pupils orally report their procedures, or by other diagnostic techniques. When this is done, the teacher will frequently find that the best remedial procedure is to guide the child through a re-learning process in order to develop correct ideas and understandings. If drill is applied before the program of reorganizing the child's thinking has taken place, the drill will serve only to make permanent his faulty thinking and procedures.

The survey kind of test also serves an important purpose. Such tests quite accurately reveal the status of the class as compared with other classes in the school system or as compared with national norms. However, because of the broad area covered by this kind of test they do not rank pupils precisely within an individual class. Neither do they reveal in detail the difficulties that children are having. The teacher should use the results of a survey test as tentative indications of possible areas of difficulty in which more careful diagnostic techniques should be applied. Finally, it must be recognized that the available achievement and survey tests usually include items which measure only computational competency and problem-solving ability and therefore fail to indicate pupil achievement in other important areas of arithmetic.

Conclusion—Several important and promising factors were evident throughout the two weeks of seminar meetings: (1) It was realized that administrators, supervisors, and teachers must focus more attention on the subject of arithmetic. (2) The group agreed that one reason why arithmetic is so inadequately taught is that those responsible for supervising and teaching arithmetic do not themselves understand the content of this subject. Those who are responsible for the arithmetic program must no longer evade their responsibility; rather, they need to use every possible means to develop adequate understanding in order to attack intelligently the problems involved in improvement of teaching of arithmetic. (3) There was increasing recognition that the system of thinking that is called arithmetic is much broader in its scope and implications than has usually been assumed. (4) There seemed to be a constantly growing appreciation

of the extent to which even the more complex phases of arithmetic can be made sensible to children. (5) The ability of the group to interpret the suggestions into their own school situations gave much promise for future improvement in the programs of these schools.

Editor for 1953 Yearbook



V. CARL ILGEN

THE Department's president, Miss Florence Gabriel, has selected V. Carl Ilgen, principal of Pershing School, University City, Missouri, as the new member of the Editorial Committee. Mr. Ilgen will assist in the preparation of the 1951 and 1952 Yearbooks and will be chairman of the Committee for the 1953 Yearbook.

It is an honor to be chosen to serve on the Editorial Committee of the Department of Elementary School Principals, for only outstanding elementary school principals who are truly interested in furthering the cause of elementary education are selected.

The Editorial Committee plans and publishes the Yearbooks of the Department. This committee consists of three members, assisted by a member of the staff of the Research Division of the National Education Association. It is a rotating committee, each member serving for a period of three years and assuming the chairmanship during the third year. At the present time the Editorial Committee is composed of the following members: Julia McCarthy, Detroit, Michigan (Chairman of the 1950 Yearbook); Roy E. Learned, Sacramento, California (Chairman of the 1951 Yearbook); and Helon Brixey, Knoxville, Tennessee (Chairman of the 1952 Yearbook). Dr. Clayton D. Hutchins, Assistant Director, NEA Research Division, has been assigned to work with the committee.

GEOGRAPHIC SCHOOL BULLETINS

The National Geographic Society of Washington, D. C., announces that the publication of their Geographic School Bulletins was resumed on October 3, 1949. There are 30 weekly issues each year, available to teachers at very low cost. Last year nearly 35,000 took advantage of this wonderful opportunity of keeping abreast of current changes in the world by subscribing to these Bulletins.

Child Development Through a Unified Curriculum

LEVERSIA L. POWERS

Chief, Elementary Education, Department of Public Instruction, Harrisburg, Pennsylvania

THE problem of child development through a unified curriculum strikes much deeper than merely setting up a closer correlation of subject matter. The importance of making every effort to have all aspects of learning reinforce all other aspects through a problem approach in which one uses facts and skills meaningfully cannot be overlooked. I feel, nonetheless, that to become over dependent upon the "unit" procedure or to make it the only fundamental approach to the problem will result in considerably fewer and less valuable results than seem needed. Therefore, since previous speakers have discussed unification within and among subject matter fields, I shall try to deal with certain underlying problems the solution of which seems to me to be of paramount importance if we ever hope to get real results in child development in our public schools.

Four great problems must be painstakingly worked through even though we know that it may well take us years to solve them. They are, however, so fundamental that there appears to be little possibility of our "developing children through a unified curriculum" except in proportion to how far we progress toward their solution. These four problems are: having a whole-souled and able teacher in every classroom; having a room for every teacher that is a well-planned and well-equipped learning laboratory; delegating to each teacher thirty or fewer pupils so that some of the assembly-line aspects of education may be eliminated; and supplying each teacher with the help and resources she needs in all aspects of child growth. Without these four things attempts to develop children can be no more than superficial.

No one, I believe, will fail to agree that the best single "gadget" in running a good school is a good teacher. We simply don't have enough of them who are of the needed high caliber. This problem requires several attacks. First, we elementary teachers need to do a better job of selling our profession by our own pride in our calling. Teaching young children is the most rewarding and the most important job in the world today.

We need to dress up our personalities and take our rightful places in our respective social and community settings. We are competing in an open market and we need to glamorize our profession a bit to attract many of our best young people into it. Negative personalities with poor social and scholastic backgrounds are not going to do much with child development no matter what kind of a course of study is developed.

Another basic requirement for a unified curriculum is for the school board, representing the community, to translate their building policies and purchasing policies in terms of the curriculum. Little actual change comes about in teaching procedures that involve the whole child unless the building and the materials in use make it possible for children "to practice what we preach." A reading program, for example, cannot be keyed to a wide variety of children's needs and interests unless there is a library and a library corner so arranged as to make reading a pleasant and possible constant. The health program is not going to be a unified approach to child development unless the lighting, seating, ventilation, toilet facilities, drinking arrangements, and the like are so arranged as to bring about constant practice of good habits. This phase of a unified program calls for a community approach.

The size of classes is also a vital part of our desire to develop children. There is a limit to what even the best of teachers can do, and to maintain close personal relationships with more than thirty growing boys and girls seems to be approaching the limits of one person's time and efforts. Certainly the teacher must take time to know each child—to know his strengths and weaknesses, his fears and hopes, the times he needs praise and the times he needs to learn self-control and discipline. This calls for home visits, personal conferences, adjusted curriculums, permanent records, consultations with nurses, doctors, psychologists, perhaps services of specialists in art and music, use of such community services as clubs, churches, and the like. Nationally, we have much to do to bring about this condition, under which we can hope really to develop children because we can know them.

I have left to the last of the four points the matter of helping teachers, because I believe it to be tied into all three of the previous points. We may as well face it—good teachers like and want help to keep themselves skillful and up-to-date, and poor teachers need help. Nothing in this world stands still, and the teaching profession is no exception. All teachers are not now, and probably never will be, in a position to keep themselves going "under their own steam." In the first place they are, by the very

nature of their work, tied to a classroom of children all day, all year. They have neither the time nor, in most cases, the money to visit, to see, to be experts in all fields. Indeed I do not see how they can ever be expected to function efficiently without resource people to whom they can turn for such specialized services as those of doctors and nurses, art and music helpers, psychologists, clinics of various sources, and someone to whom they may turn for real and practical help in solving everyday problems in the so-called regular fields of instruction.

Another aspect of this same problem is that of time. It seems to me that as we study this whole problem we must inevitably come to the time when teachers are hired for and paid for more days of work than those when the pupils are in actual attendance. We have depended upon volunteer teachers on volunteer time long enough. In-service training should be a planned part of total long-term plans for entire faculties that all may understand the basic philosophies of the system in which they function and all may work intelligently toward common goals.

It may seem that I have wandered far from my original topic of child development, but to my mind it seems that we must tackle underlying causes first. We may talk the philosophy of integration, of the whole child, of the unified approach, but we aren't going to get far until we see this curriculum business as one in which the administration, the building, the materials of instruction, the size of classes, the teachers, and the professional resources available to them are basic problems. Surely we need to relate, to correlate, to make activities meaningful and purposeful, to be ever alert to attitudes in the making, but there isn't much use in talking about them to over-burdened and poorly selected and trained teachers in poorly equipped classrooms. Let's attack this problem from the bottom.

NEW STAMP ALBUMS FOR SCHOOLS

To meet the requests of teachers, the U. S. Savings Bonds Division of the Treasury Department has recently issued new stamp albums with peacetime motifs. These albums may be obtained through State Savings Bonds offices rather than through the post offices. It is expected that the demand from schools will be large, so don't delay getting a supply.

By the way, are you receiving regularly the *School Savings Journal,* published semi-annually by the Education Section, U. S. Savings Bonds Division? This publication contains much helpful material for teachers.

Skills Instruction for the Gifted Child in the Regular Classroom

ROBERTA KELLOGG

Educational Consultant, Public Schools, Brockton, Massachusetts

THE group decided to limit discussion to four considerations: (1) Who is the gifted child? (2) How do we identify him? (3) What are his needs? (4) How can these needs be met?

I. **Who is the gifted child?**—There is frequent confusion between the *talented* child and the *gifted* child. The talented child is one with specific talents or abilities in a single area. His IQ is not necessarily high; he must be encouraged in all-round development; his special interest should be capitalized upon. Less gifted children need recognition as provision for satisfaction.

The gifted child is one with a high measure of competency in learning ability. The best definition that has been offered is: the gifted child is one with great natural intellectual endowment capable of assimilating regular school material at a rapid rate. The gifted child is one who never reaches the saturation point, intellectually speaking. For purposes of identification, an IQ of 130 has been agreed upon as the minimal for this classification.

II. **How do we identify the gifted child?**—The primary and principal method is through tests. Intelligence tests, though limited in scope and as subject matter indices, must be used. Close correlation with individual Binet is necessary in a group test. It is suggested that tests for Emrly identification be followed by an individual psychological evaluation. California Mental Maturity, Primary Test; Pintner-Cunningham; Kuhlman-Anderson. *Early* identification is the essential, with individual intelligence test as confirmation.

Achievement tests, while not wholly reliable indicators, need consideration. The best achievement is usually in reading, language and arithmetic reasoning; the poorest in handwriting and spelling.

Personality tests are helpful in guidance of gifted children. Interest inventories should be used as well.

Size and physical development are apt to be superior to those of the average child.

Types of intelligence in the gifted child are: (1) abstract—response to symbols—the gifted child's response is very high in this area; (2) concrete —response to things instead of symbols of them—will do well in vocational training; (3) social—ability to react to persons instead of symbols and things—this is the real need of the gifted child.

Definitions for these superiorities are: capacity—innate, undeveloped power; ability—power to produce; aptitude—ease of learning. These three combined make an efficient individual.

III. **What are the needs of the gifted child?**—Recognition of the needs of the gifted child is essential so that he may be trained for community, national, and international leadership. We need to develop our maximum leadership potential. Gifted children must be well trained in fields of human relationships. Democracy has been unfair to the gifted child because: people are sympathetically inclined to the less gifted; there is a feeling that it is undemocratic to segregate the gifted; education has been influenced by sympathy for the "underdog."

A clearer understanding and interpretation of the term *mental age* is needed. (Refer this to the American Psychological Association for clearer interpretation; i.e.: Does a six-year-old child with a mental age of 10 years function mentally or scholastically on a 10-year-old level? What can be expected of such a mental age?) What techniques can be used to help the gifted child function at maximum capacity? How can we challenge his intellect? How maintain a high interest in many activities? The problem resolves itself not so much on teaching skills to the gifted child as on solving problems of adjustment and successful group participation.

Gifted children usually take only half the time to master drill subjects. Hence the challenge is to motivate and enrich their school work while others are learning skills at a lower rate. Repetition and "busy work" are stultifying to the quick learning child.

IV. **How can the needs of the gifted child be met?**—Five ways are suggested: (1) *Acceleration:* (a) occasionally advantageous after a complete clinical study; careful consideration must be given to size, social adjustment, maturity. (b) The child should go at his own pace—acceleration is over artificial barriers. (c) The middle grades are a hazardous place to attempt acceleration. (d) Skill subjects need to be completely mastered. (e) Acceleration should be used only rarely.

(2) *Enrichment:* (a) This takes an exceedingly well-prepared teacher. A very bright child in a classroom is a threat to a teacher's security. (b) The superior child becomes bored with recitation and repetitive drill.

(c) He is apt to take rewards (marks) as a matter of course. (d) Without proper challenge, ambition dwindles into unfavorable attitude toward life. (e) If curriculum actually makes provision for individual differences, there is no real problem. (f) Enrichment is not more work or drill. The child should be shown "short cuts"; he should be given greater understanding of reason for drill; when excused from formal drill, he should be given some related work. (g) Judicious use of workbooks: the gifted child should go through a workbook at his own speed. (h) Specific methods of enrichment include: special reports—they need to be challenging and to be evaluated in the light of his own ability; more difficult questions for assignments; acting as helpers with less gifted; use of illustrations—not as many needed—the gifted child can provide them and exercise his creativity; opportunity to build abstract knowledge—ability to generalize, opportunity to develop logic, ability to reason, authentic mathematical problems without numbers; excursions and field trips—direct experience of real benefit, careful planning and follow-up, opportunity to contact place and plan excursion; nature study and gardening; films—taught to run projector and take care of equipment, asked to evaluate films; radio; television; mechanical things in school building—inter-room communication, duplicators, typewriters; organized clubs—camera, nature, science, puppet; research skills—library, encyclopedia and reference; live museums; use of pets to awaken feelings of affection; foreign language skills.

(3) *Individualized instruction:* Of value only when used carefully—with good supervision, with excellent self-evaluation. Tests of "shut-ins" show achievement far short of what same child does in class situation.

(4) *Homogeneous grouping:* In the elementary grades, this is occasionally advisable with divided grades (better groups of two grades together). This grouping is of value only when special efforts are made to have an enriched program. The children should be given material at their level.

(5) *Special classes* (in Brockton, Massachusetts, grades 4, 5 and 6). Limited to twenty-one in a class. (Upon entering grade 7, these children are placed in the fastest moving division.) Children selected for possible assignment to special classes are referred to the Brockton Child Guidance Center for complete study and evaluation. These children include those with high IQ, those of exceptionally high achievement, and those of seemingly high intelligence who are not working at capacity. Parents are notified of referral to clinic, and may accept or reject the offer of special class. If there is parental agreement, the child is interviewed by psycholo-

gist, psychiatrist, and social worker. About seven out of every 25 children referred to clinic are assigned to special class. Criteria for selection: IQ of 130 or more; family background; school history; emotional need; educational need. Children not accepted for the class are continued on the clinic list and studied periodically.

The curriculum for the special class has arithmetic separated by grades; spelling partially separated by grades, with some overlapping; language skills taught to group with much creative work. The program is designed to keep classes integrated with whole-school program: assembly program presented as in all other rooms (parents often invited); participate in orchestra, band, etc.; play with others on playground; handle sale of milk in the school; get what they want in the way of supplies; school newspaper. Grammar is taught as such. One afternoon a week is devoted to club activities such as stamp, science, dramatic, and the like. The social studies program is taught to the group as a whole.

Qualifications for teacher of special class include: Liberal Arts graduate; Master's degree in education (mental health, psychology).

Methods of reporting to parents: achievement tests by first of October, with scores interpreted to parents; report of progress in middle of the year; achievement tests at the close of the year, with scores compared to October results.

Limitations of special classes: the danger of increased egocentricity can be counteracted by a large number of activities and the challenge of being grouped with others of like ability.

Summary

A. Teaching of skills is not the greatest problem, but rather enrichment.
B. Problems of the gifted child are usually emotional and tied in with the home.
C. Enrichment takes many forms—reading, music, art, leadership, creative writing, construction activities, planning activities.
D. Enrichment for the gifted child is a community problem and involves the school, the home, the church, the library, clubs, playground activities, community resources.
E. We need to use these gifted children to investigate opportunities and to organize activities.
F. Need to develop all leadership potentialities.
G. Need to provide opportunities for more teaching of foreign languages at younger ages.

Skills Instruction for the Slow-Learning Child in Regular Classroom

HELEN BLAIR SULLIVAN

Professor of Education, Boston University, Boston, Massachusetts

RETARDED children may be divided into four groups: the physically handicapped; the socially handicapped; the constitutionally immature; the educationally handicapped.

Factors Affecting School Achievement—There are physical causes which may be classified as organic. They include focal defects such as infected teeth, diseased tonsils, infected sinuses. Cardiac and diabetic cases, children with auditory and visual defects, and those with cerebral palsy need special attention.

Some psychological factors affecting learning are: poor visual discrimination as is shown by the child to whom *b* and *d*, *was* and *saw*, etc. are the same; low auditory discrimination as when a child cannot associate sounds with letters; low visual memory or inability to remember word pictures from day to day; difference in learning rate—some bright children are slower in learning pace but retain well.

Educational factors affecting learning are: beginning the educational process before the child is mentally ready; beginning formal education before the child is educationally ready; transfers from school to school; teacher absence—emergency teachers, teacher substitutes; early absence on the part of the child. The educational load should be adjusted to the needs of the children. Something is wrong when 35 per cent (Gates' findings) of our normal youngsters are learning slowly—that is, they are not achieving *up to their individual capacities.*

Characteristics of Slow-Learning Children and Suggestions for Teaching Them—Slow-learning children have limited powers of self-direction. The teacher must evaluate materials to be given them and omit everything but that which is basic. They learn slowly and forget quickly—many repetitions are needed. They lack social intelligence—there should be emphasis on correct habit formation. They must have many opportunities to try the same thing over with success; they should have special materials.

These children have slow reaction time and limited power of assimilation—drill lessons should be short and given often. They fail to recognize

familiar elements in new situations—what seems perfectly obvious to us must be explained to them. They have limited ability to work with abstractions, are slow to form associations between words and ideas, and often get confused. The teacher should make much use of personal experience, and should keep the child at his level of comprehension.

The outlook and points of view of slow-learning children are extremely local. A large percentage of these boys and girls stay all their lives in or near communities where they were born. Teachers should stress observation of various things around them and should help them to develop some community interests.

Slow-learning children have short attention spans: children with an IQ of 80 concentrate well for about 10 minutes: IQ of 90, 15 minutes. (The so-called average child with the 100 IQ cannot concentrate successfully for more than 30 minutes.) Broken supervised study periods are helpful.

These children do a monotonous activity well without becoming bored. They are needed in adult life, for much of the operative work in industry today is monotonous. They are unable to set up and realize standards of workmanship to the extent that they can detect their own errors—let the bright ones check the work of the retarded.

The slow learner is a confirmed guesser. If teachers do not *use the workbooks correctly and check them as the work is done,* they shouldn't have workbooks. Poor procedure with workbooks is especially bad for slow learners.

The slow learner lacks ability to analyze and reason. He should not be taught techniques that are too difficult.

Slow-learning children are very imitative—they need lots of opportunities to see good examples of the patterns we wish them to accept.

They have poor muscular coordination. The old saying, "If you can't work with your head, work with your hands," is a fallacy. Coordination is tied up with intelligence. Speed and accuracy on a simple process may be the life work of the slow learner. Therefore, many practices of the same thing to pick up speed are recommended as it is the principle on which piece work is based. Give them the kinds of handwork that they can do well. Handwork which is purposive and correlated with activity units is better for them than the isolated type of the past. Studies show that special training for slow learners pays dividends in higher morals, better family living, improved economic situations, and in better adjustments in general.

Flexible Grouping in the Classroom to Provide Better Instruction for the Slow Learner—Grouping is very important, but it must be carried

on so that children participate in a quiet, busy, workshop-like learning situation. Teachers should keep in mind that: (1) the range of difficulty of reading materials should be comparable to the social level and reading abilities of the groups; (2) there should be enough materials at each level to supply sufficient practice for genuine achievement; (3) the easier books for pupils below grade in ability should not be those used in lower grades; (4) advanced books for those above grade level should not be those ordinarily used in higher grades; (5) as far as possible, enough material should be provided to enable children to read at their own levels in social studies and other fields.

When organizing for the small group process, the following points should be kept in mind: children should be grouped on the basis of analysis; grouping should be flexible; begin with the best group, gradually add the other three (average, slow, and those who need remediation); adjust materials to the needs of the child.

Consult cumulative records and get information about tests. Groups of teachers should work together and decide upon tests to be used. A careful test analysis should be made to be certain the test fits the situation and can easily be interpreted by the teacher. Certain tests fit some communities better than others do. The best tests for teaching purposes have some diagnostic possibilities.

The Skills Program—There are three patterns of skills work which every child needs and which should be continuous from kindergarten through high school. They are *thorough type skills, partial type skills* and *associative skills*. The thorough type puts emphasis on things through which the child is expected to get new knowledges. The partial type places emphasis on ways of finding new things quickly. Associative skills are needed to enrich all reading as the child goes along.

It would be helpful if more teachers came to think in terms of the following five blocks of learning: (1) period of readiness; (2) period of initial instruction; (3) period of rapid progress in fundamental attitudes, habits and skills; (4) period in which we extend word recognition and enrich the experiences related to the content; (5) period of refinement or use of higher mental processes.

Study skills for all children, including slow learners, are: following directions; noting details, organizing ideas; locating specific information; remembering details at a later date; developing sequence of events; using mental imagery and visualization; memorizing; picking relevant material; judging values; remembering personal characteristics from reading; skim-

ming for specific answers; rereading for different purposes; taking key-word notes for use later; selecting proper titles; drawing inferences; recognizing comparisons and opposites; interpreting the author's meaning; building individual associations around content material; constantly increasing speed in skimming; doing idea lines; outlining; retelling from outlines which have been made; interpreting graphs, maps and charts; rapid use of the dictionary; use of study guides; using library card file correctly and rapidly; using critical thinking as well as listening; using many kinds of source and reference materials independently.

Teaching Spelling to Slow-Learning Children—Before a child can spell, he must have good visual discrimination and an ability to use word analysis. Often it is desirable to teach word analysis in connection with spelling rather than reading. Slow-learning pupils, especially, need careful correlation among the words used in reading, spelling, composition, and handwriting. It is preferable that a child develop security in use of a small spelling vocabulary from his experiences and needs. It is wrong to use the same spelling workbook for every child in a given grade. Committees of teachers should work out the spelling lists. Social studies, language and reading words that are to be transferred into writing should be included in their lists.

Spelling difficulty usually results from one of the following causes: inability to understand meaning of words; inability to use transfer from visualization to writing; inability to transfer column spelling to written composition or general recall; inability to use the necessary speed of handwriting; inability on the part of some children to avoid systematic error. Older methods overemphasized the purely auditory approach. Some newer methods have leaned toward the visual approach. A synthesis of these approaches is needed. Usually, spelling should be a small group activity. The number of words to be learned each week depends upon the child's capacity to master spelling.

Teaching Arithmetic to Slow-Learning Children—The main consideration should be to make number more meaningful to the child.

Eliminate hour after hour of fruitless labor with abstract number.

Number concepts should always be applied to actual situations for the slow learner. Abstract numbers are entirely a memory process which even the slow learner can do but which do not transfer to life situations.

The good teacher will make the child aware of situations where there is relationship with number processes he is learning even when not a part of the arithmetic period.

A knowledge of the basic number facts is as essential for the dull as for the bright.

Plenty of simple verbal problems which the child can answer orally should be supplied.

The mentally retarded should master each fact and skill as he first encounters it. Do not move the child on to the next difficulty before he is ready. The slow child takes much more time to habituate his learning.

To overcome basic weaknesses the teacher should use diagnostic tests.

The child, even in arithmetic, should be working toward a definite standard of achievement.

The child should be kept aware of his progress.

The teacher should consider the following elements as a basis for her teaching: rate of work; accuracy of work; altitude of level of difficulty of most difficult example the child can work correctly; the area of the skills he has covered; his methods of work.

Social Studies for the Retarded Child—This teaching should begin as soon as the child has some background for reading. It should be taught in relation to what life will bring the child and always in connection with his social living.

The program should be expanded and enriched to bring all the possible new experiences into the life of the child.

Correlation of social studies into one comprehensive subject that will interpret the environment adjusts the mentally retarded child to the world in which he lives.

The program should allow opportunity for visual education, trips, dramatics, and exhibits.

The teacher should always aim to make the child alert to observe the various things in the world around him.

In the lowest grades the school itself should be used as the unit basis. The school yard and surrounding area can be correlated in the program.

The teacher can work with the study of air, sunshine, soil, growth of plants, etc. in relation to their effect on the life of the child.

Rules for the child's welfare as well as safety can be taught here and pave the way for the need of laws.

The next or intermediate group should be concerned with the neighborhood or community in which they live.

Orientation of direction and location of prominent buildings should be part of this program.

Insects, birds, flowers and trees of the community should be studied to help the child know more about the life around him and the effect of nature upon it.

The local history should be studied and can be worked into tableaux.

Civic rules such as traffic rules, use of the fire alarm, duties of police and postal departments should be taught here.

A study of the town or city officials, who pays them, what they do, etc. can be included at this time.

The outcome of such a study should be a greater respect for law, which makes it possible for people to live together and respect each other's rights.

The next group should be concerned with the state. The mind of the retarded child should not be cluttered with abstract details, such as boundaries, etc.

A study of taxes, public utilities, keeping the water supply clean, protection against forest fires, and the privileges of the people of the state should be studied now.

The world can be taken for work with the older groups but only as it affects the life of the child after he leaves school.

Emphasis should be placed on likenesses between nations, the contributions of various nations to us, and our interdependence on each other.

The major objective of all the teaching of the social studies should be to make for better citizenship and community adjustments as well as a more efficient use of leisure time.

Conference in South Central District

Plans are under way for a three-day conference at Fort Worth, Texas, March 23-25, 1950, for the elementary school principals of the South Central District. This conference, like the one held in the Northwest District in 1948 and in the Southeast District in 1949, is sponsored by the national Department of Elementary School Principals, and gives promise of being as valuable a regional meeting as those earlier ones. The theme of the conference is, "We Build Through Understanding."

Local arrangements are being made by the Director of the South Central District, Dr. Thomas E. Pierce, Texas State College for Women, Denton, Texas. Participating states and their representatives are: Arkansas—Mrs. Hazel H. Isgrig; Kansas—Myrtle M. Evans; Louisiana—Loretta R. Doerr; Nebraska—Florence B. Reynolds; Oklahoma—Ralph H. Kennedy; and Texas—J. Fritz Hill.

Atlantic City Convention

February 27-28, 1950

Tentative Program

Presiding: Miss Florence Gabriel, President of the Department, Shaker Heights, Ohio

Monday
February 27
St. Denis Room
Dennis Hotel
2:30 p.m.

GENERAL SESSION

Panel: Characteristics of a Good Elementary School

Leader: Dr. J. Conrad Seegers, Dean, Teachers College, Temple University, Philadelphia, Pennsylvania

Members: Dr. W. Paul Allen, Principal, Fox Meadow School, Scarsdale, New York
Miss Helon Brixey, Chairman, D.E.S.P. Editorial Committee, 1952, Knoxville, Tennessee
Mr. William Buboltz, Fifth Vice President, D.E.S.P., Milwaukee, Wisconsin
Dr. Stuart E. Dean, Associate Professor of Education, Teachers College of Connecticut, New Britain, Connecticut
Miss Caroline Patterson, President, N.E.A. Department of Administrative Women, Pittsburgh, Pennsylvania
Mrs. Blanche Schmidt, Executive Committee, D.E.S.P., Dos Palos, California

Embassy Room
Strand Hotel
5:30 p.m.

BANQUET

For members and friends of the Department

Tuesday
February 28
Madison Hotel
7:30 a.m.

BREAKFAST

Speaker: Dr. Clarence W. Cranford, Minister, Calvary Baptist Church, Washington, D. C.

St. Denis Room
Dennis Hotel
2:30 p.m.

GENERAL SESSION

Panel: Developing Child Responsibility in the Elementary School

Leader: Dr. W. Linwood Chase, School of Education, Boston University, Boston, Massachusetts

Members: Dr. Walter D. Cocking, Editor, *School Executive,* New York, New York
Dr. Bess Goodykoontz, Associate Commissioner, U. S. Office of Education, Washington, D. C.
Dr. Herold Hunt, Superintendent of Schools, Chicago, Illinois
Miss Mary G. Kelty, Author and Lecturer, Washington, D. C.
Dr. Virgil Rogers, Superintendent of Schools, Battle Creek, Michigan

Recent Publications Received at Headquarters

Arithmetic for Young America. Grades 3-8. By John R. Clark et al. *Teacher's Manual* to accompany each volume. Yonkers-on-Hudson, N. Y.: World Book Company, 1944, 1949.

Language for Daily Use, Grade Seven. By Mary C. Foley, Katherine Connell, and W. Leslie Grant. Yonkers-on-Hudson, N. Y.: World Book Company, 1949. 405 p. Illus.

Clinical Studies in Reading, I. By Staff of Reading Clinics of University of Chicago. Supplementary Educational Monographs, No. 68, June 1949, University of Chicago Press. 173 p. Paper.

Classroom Techniques in Improving Reading. Compiled and edited by William S. Gray. Supplementary Educational Monographs, No. 69, October 1949, University of Chicago Press. 246 p. Paper.

The Place of Subjects in the Curriculum. By Effie G. Bathurst, Paul E. Blackwood, Helen K. Mackintosh, and Elsa Schneider. Bulletin 1949, No. 12, Federal Security Agency, Office of Education, Washington, D. C. 33 p. Illus. Paper.

One Hundred Plays for Children—An anthology of Non-Royalty One-Act Plays. Edited by A. S. Burack. Plays, Inc., 8 Arlington St., Boston 16, Mass. 1949. 886 p.

Audio-Visual School Library Service—A Handbook for Librarians. By Margaret I. Rufsvold. Chicago: American Library Association, 1949. 116 p.

Better Elementary Schools for Oklahoma Children. First Yearbook, Department of Elementary School Principals, Oklahoma Education Association, 1949. Editorial Committee Chairman, George J. Hooper. 106 p.

Free and Inexpensive Learning Materials. Division of Surveys and Field Services, George Peabody College for Teachers, Nashville, Tenn., 1949. 175 p.

Parent-Teacher Series, Bureau of Publications, Teachers College, Columbia University, New York 27, N. Y.: *Reading Is Fun,* by Roma Gans; 51 p. *Understanding Young Children,* by Dorothy W. Baruch; 51 p. *Understanding Children's Behavior,* by Fritz Redl; 41 p. *Discipline,* by James L. Hymes, Jr.; 44 p. Illustrated. Paper.

Preparing Your Child for School. By Hazel F. Gabbard. Pamphlet No. 108, Federal Security Agency, Office of Education, 1949. 23 p. Illus. Paper.